



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
5 POST OFFICE SQUARE, SUITE 100
BOSTON, MASSACHUSETTS 02109-3912

Clean Air Act Inspection Report

Drafted: June 30, 2022

Finalized: July 11, 2022

EPA Inspectors: Davianna Vasconcelos, Environmental Engineer, Air Compliance Section /DMV/
Darren Fortescue, Senior Enforcement Coordinator, Air Compliance Section
/DEF/

EPA Reviewer: Darren Fortescue, Senior Enforcement Coordinator, Air Compliance Section /DEF/

Date of Inspection: June 29, 2022

Facility Name: Amherst College

ICIS Air ID#: MA0000002504200003

Facility Location: 6 East Drive, Amherst, MA 01002-5000

Mailing Address: 6 East Drive, Amherst, MA 01002-5000

Disclaimer:

Unless otherwise noted, this report describes conditions at the facility/property as observed by EPA inspector(s), and/or through records provided to and/or information reported to EPA inspector(s) by facility representatives and as understood by the inspector(s). This report may not capture all operations or activities ongoing at the time of the inspection. This report does not make final determinations on potential areas of concern. Nothing in this report affects EPA's authorities under federal statutes and regulations to pursue further investigation or action.

Inspection Attendees:

Name	Title	Organization
Davianna Vasconcelos	Environmental Engineer	EPA Region 1
Darren Fortescue	CAA Inspector	EPA Region 1
Daniel Balboni	Compliance and Enforcement Section Chief	MassDEP WERO
Richard Mears	Director of Environmental Health and Safety	Amherst College

Facility/Purpose Description:History

Amherst College is a private, liberal arts college that was established in 1821.

Purpose

Amherst College uses academic and lab facilities, athletic fields and facilities, and dormitories to provide education, athletics, and housing to students.

Generators

Amherst College owns and operates 21 generators at the facility, 20 stationary and 1 portable. Generator information for the Generators inspected is described in Attachment 1.

Number of Employees and Working Hours:

Amherst College employs approximately 1300 employees. The facility is open to staff from 7:00 am to 3:30 pm on business days and is staffed with campus police 24 hours per day, 7 days a week.

Potentially Applicable Clean Air Act Requirements:

40 CFR Part 60, Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (“Subpart 4I”)

40 CFR Part 60, Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (“Subpart 4J”)

40 CFR Part 63, Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (“Subpart 4Z”).

Previous Enforcement Actions:

A “Detailed Facility Report” from EPA’s Enforcement and Compliance History Online database indicates that there have been no informal or formal enforcement actions taken against Amherst College in the past five years.

Opening Conference:

Entry

On June 29, 2022, at 9:05 am, EPA Region 1 representatives Davianna Vasconcelos and Darren Fortescue arrived at the facility at the 150 Northampton Drive, Amherst, Massachusetts gate. EPA representatives entered the facility and met with Daniel Balboni of MassDEP WERO and Richard Mears of Amherst College. Mr. Fortescue presented his credentials and Ms. Vasconcelos initiated an opening conference.

Opening Conference

Ms. Vasconcelos asked Mr. Mears for the physical and mailing addresses of the facility. Mr. Mears said that 6 East Drive, Amherst, Massachusetts is the physical and mailing address for the Environmental Health and Safety department. Mr. Mears said that other offices at the facility have different mailing addresses.

Ms. Vasconcelos asked if the facility has an air permit issued by MassDEP. Mr. Balboni said the facility was issued a Restricted Emission Status permit (Final Approval number RES #1-R-94-067) prior to 1998 that was modified in 2009. Mr. Mears confirmed the facility operates under the Restricted Emission Status and that the facility completes a Source Registration with MassDEP annually.

Mr. Mears said the facility owns and operates 21 generators. Mr. Mears said all 21 generators are emergency use only. Mr. Mears said that, in the event of an emergency, 18 of the generators provide limited power, such as for emergency lighting, fire protection systems, heat, and hot water. Mr. Mears said that, during an emergency, 3 of the generators, one generator located in Valentine Hall, and two generators located in the Science Center, power the entire building they are housed in.

Ms. Vasconcelos asked Mr. Mears if Amherst College participates in a demand-response program and explained that a demand-response program typically entails a contract between a facility and the electrical provider for a facility to turn on generators to limit a facility's load from the grid and receive monetary incentive from the electrical provider. Mr. Mears said that, to his knowledge, Amherst College does not participate in a demand-response program, and Amherst College does not have a contract with the electrical provider to turn on the generators. Mr. Mears said that the facility has the capability to enter "Islanding Mode" where, in the event of an emergency, the connection from the grid could be severed and the facility could run on its own power produced via the generators; however, he said this would not involve any financial gain for the facility. Mr. Mears said that, to his knowledge, other than to test the system, Amherst College has never actually entered "Islanding Mode."

Ms. Vasconcelos asked if any of the generators had completed emissions testing or stack testing and Mr. Mears said he did not know and would need to check the records to confirm.

Mr. Mears said that Amherst College uses the contractor Richard Glock of Power Generation Technologies to provide service and preventative maintenance for the generators. Mr. Mears said that Amherst College keeps records of the maintenance and repairs and operating run logs. Mr. Mears said that 20 of the generators are programmed to run automatically once a week for 30 minutes, including a 20-minute cool-down period. Mr. Mears said the remaining generator, the portable generator that is located on a flatbed trailer, is programmed to run once a month for 30 minutes, including a 20-minute cool down period. Mr. Mears said that, to his knowledge, the portable generator has only been used twice in the past 7 years, once during scheduled maintenance of a building, and another during an unexpected snowstorm. Mr. Mears provided a folder that contained what appeared to be generator run logs. Mr. Fortescue reviewed the contents of the folder and suggested that Amherst College might want to consider documenting more details for each entry in the logs describing the purpose the generators were run for.

Ms. Vasconcelos asked if Amherst College retains copies of Certificates of Conformity for the generators. Mr. Mears said he was unsure if Amherst College does have Certificates of Conformity and he said he would check the records. Ms. Vasconcelos asked if Amherst College keeps fuel records describing the type of fuel used at the facility and amount. Mr. Mears said Amherst College does keep fuel records and provided the EPA representatives a folder that contained several invoices. Ms. Vasconcelos and Mr. Fortescue reviewed two fuel invoices dated 06-27-2022 and 10-11-2016, both of which documented that the fuel the invoices were for had been ultra-low sulfur diesel with a sulfur content of less than 15 ppm.

Facility Tour:

Mr. Mears led Ms. Vasconcelos, Mr. Fortescue, and Mr. Balboni on a tour of the facility. During the tour, Mr. Fortescue took pictures of the generators, available nameplates, and available emissions labels. All photographs are in the inspection file.

Mr. Mears led the group around the campus to inspect the generators in the following order:

- Mayo Smith
- Newport
- President's House
- Webster
- Beneski
- Moore
- Appleton
- Sterns
- Greenway

- Merrill
- Wieland
- Seligman
- Music
- Lipton
- Valentine
- Central Energy Plant
- Science East
- Science West
- Portable*
- Frost Library

Documented generator information can be found in Attachment 1. Mr. Balboni left the inspection after visiting the “Wieland” location. EPA representatives did not inspect the portable generator; however, as the group drove past it, Ms. Vasconcelos observed that it was on a flat-bed trailer. EPA representatives did not inspect “Bunker” location.

John Chiarizio, the Electrical Shop Supervisor for Amherst College, joined the group while they were at the “Mayo Smith” location. Mr. Chiarizio said that the maintenance schedule for the generators includes monthly and semi-annual checks. Mr. Chiarizio said that the monthly maintenance checks are performed by Amherst College personnel, and involve checking the generators’ hour log, battery, temperature, oil levels, antifreeze levels and fuel levels. Mr. Chiarizio said that the semi-annual maintenance checks are performed by a contractor, Cummins Northeast, and involve load bank testing, checking oil and antifreeze integrity, and parts are inspected for replacement. Mr. Chiarizio said that Cummins Northeast replaces the oil once every year. Mr. Chiarizio said that the oil can be analyzed if there is a problem with a generator; however, this is not done regularly. Mr. Chiarizio was only present while the group inspected the “Mayo Smith” location.

Closing Conference:

Ms. Vasconcelos, Mr. Fortescue, and Mr. Mears attended the closing conference.

Ms. Vasconcelos asked Mr. Mears to clarify the facility’s use of “Islanding Mode.” Mr. Mears said that if an emergency power condition was occurring the facility could choose to go into “Islanding Mode.” Mr. Mears said if this occurred the facility would ask the electrical provider to sever the facility’s connection to the grid and the facility would use the generators on site to power the facility. Mr. Mears explained there is no financial incentive to entering “Islanding Mode” and there is no contract in place between the facility and the electrical provider for “Islanding Mode.”

Mr. Mears said that Amherst College does participate in an energy curtailment program where, if the demand on the grid is high, the electrical provider will request that the facility limit its power demand by shutting off unnecessary utilities such as temperature controls or non-emergency lighting.

EPA representatives said that generators located at the facility could be subject to various regulations including Subpart IIII, Subpart JJJJ, and Subpart ZZZZ. EPA Representatives said that the specific regulations a generator may be subject to depends on a variety of factors including the type of facility at which the generator is located, and the generator's fuel type, capacity and data of manufacture. Mr. Fortescue recommended that Amherst College review the potentially applicable regulations. Ms. Vasconcelos recommended that Amherst College consider adding the regulations to the facility's Environmental Results Program for the generators.

Ms. Vasconcelos asked if any information provided during the inspection could be considered confidential business information and Mr. Mears said no.

Ms. Vasconcelos requested that Mr. Mears email her to clarify that the "Age" column in a previously emailed spreadsheet containing information about the generators indicates the year the generator was installed at the facility, not the year the generator was manufactured.

EPA representatives thanked Mr. Mears for his time.

EPA representatives left the facility at 3:30 pm.

Attachment 1: Generator Inspection Information

Name/Location	Mayo Smith	Newport	Presidents	Webster	Beneski	Moore
No. of buildings	4 buildings	1 building	1 building	5 buildings	1 building	2 buildings
Manufacturer	Ford	Cummins	Cummins	Caterpillar	Cummins	Ford
Model #	WSG-1068	GC02-1414256	GGMB-1210346	3056	GTA8.3G1	ESG642I6005E
Serial #	15615705	G140725937	H120376309	*7AK03918*	46405989	01-06-006303
Manufacture Date			Aug-12		Jul-04	Jun-01
Installation Date	2008	2014	2012	1996	2006	2001
Maximum Capacity	126 BHP				202 BHP	30 kW
Hour Meter Count; Type	559.1 H; digital	226.8 H; digital	272.1 H; digital	918.9 H; ticker	483.7 H	555.8 H; ticker
Fuel Type	Propane	Propane	Propane	ULSD	Propane	Propane
Purpose	Emergency lights; fire suppression system	Emergency lights; fire suppression system; heat; hot water	Emergency lights; fire suppression system	Emergency lights; fire suppression system; heat	Emergency lights; fire suppression system; heat; doors	Emergency lights; fire suppression system
Emergency Use	Y	Y	Y	Y	Y	Y
Demand-Response	N	N	N	N	N	N
Maintenance	Inspection 2-10-22			Inspection 2-9-22 (903 Hours)	Full Service 2-8-22	Full Service 2-8-22 (545.2 Hours)
EPA Engine Family Number			CCEXB03.0GDA			

Name/Location	Appleton	Sterns	Greenway	Merrill	Wieland	Seligman
No. of buildings	4 buildings	3 buildings	2 buildings	2 buildings	2 building	1 building
Manufacturer	Ford	Cummins	Ford	John Deer	Ford	GM
Model #	ESG642	GTA8.3G2	E172A	RG6076A	WSG-1068I-6005-A	5.0L
Serial #	04ZK20806	46432768	3060300	RG6076A202038	03-06-055511	F130522397
Manufacture Date	Jan-04	Oct-04	Feb-16		Apr-03	Jun-13
Installation Date	2004	2005	2016	1996	2004	2013
Maximum Capacity	74 BHP	224 BHP			60 kW	
Hour Meter Count; Type	716.2 H; digital	549.7 H; digital	139.9 H; digital	1055.0 H; ticker	565.7 H; ticker	261.3 H; digital
Fuel Type	Propane	Propane	Propane	ULSD	Propane	Propane
Purpose	Emergency lights; fire suppression system	Emergency lights; fire suppression system; heat; hot water	Emergency lights; fire suppression system; heat; hot water		Emergency lights; fire suppression system; heat; hot water	Emergency lights; fire suppression system; heat; hot water
Emergency Use	Y	Y	Y	Y	Y	Y
Demand-Response	N	N	N	N	N	N
Maintenance		Full Service 2-11-22 (537.7 Hours)	Inspection 2-9-22 (130.5 Hours)			
EPA Engine Family Number						F130522397

Name/Location	Music	Lipton	Valentine	Central Energy	Science East	Science West	Frost Library
No. of buildings	4 buildings including 1 fire pump	3 buildings	1 building	1 building	1 building shared		2 buildings
Manufacturer	Cummins	GM	Cummins	Cummins	Caterpillar	Caterpillar	Cummins
Model #	LTA10-G1	8.1L	QSX15-G9	6CTA8.3G2	C32	C32	GTA8.3G1
Serial #	35073655	8P1L14117	36015649	46302434	PRH06940	PRH06942	46474182
Manufacture Date	Nov-02		Nov-12		Apr-17	Apr-17	Jul-05
Installation Date	2003	2007	2013	1999	2017	2017	2005
Maximum Capacity	380 BHP	198 BHP	755 BHP (standby)		1474 HP	1099 HP	202 HP
Hour Meter Count; Type	786.9 H; digital	496.2 H; digital	293.5 H; digital	234 H; digital	89.7 H; digital	92.9 H; digital	339.7 H; digital
Fuel Type	ULSD	Propane	USLD	ULSD	ULSD	ULSD	Propane
Purpose	Emergency lights; fire suppression system; heat; hot water	Emergency lights; fire suppression system; heat; hot water	Whole building		Whole building		Emergency lights; fire suppression system; heat; hot water
Emergency Use	Y	Y	Y	Y	Y	Y	Y
Demand-Response	N	N	N	N	N	N	N
Maintenance							
EPA Engine Family Number							